Remarks

Claims 1-26, 28-30, 32, 34-35, 38-54, and 56-84 are pending in the application. Claims 80, 81, and 83 have been amended. Claim 84 has been canceled. No new matter has been added by virtue of this amendment. Reconsideration of the application as amended is requested.

Claim Rejections--35 U.S.C. § 101

The Examiner states that "claims 80, 81, 83, and 84 are rejected under 35 U.S.C. § 101 because the claimed invention is non-statutory." The examiner states that "inventions which, as a whole, encompass a human being are non-statutory." MPEP 2105

Claims 80, 81, and 83, have been amended so they do not encompass a human being. Claim 84 has been canceled. Thus, the rejection of claims 80, 81, 83, have been traversed.

Claim Rejections--35 U.S.C. § 112, first paragraph

The Examiner states that "claims 1-26, 28-30, 32, 34-35, 38-39, 64-74, 77-79, and 82-84 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The examiner states that the feature "wherein all power for powering said sensing unit is derived from said control unit," added in Amendment E constitutes new matter. The Examiner states that "FIG. 1 clearly illustrates the sensors 22 as drawing power from a battery 36 which is completely separate and distinct from the control unit 50. Even with the understanding that the battery is remotely rechargeable, the fact that a battery 36 outside the control unit provides the power contradicts the claimed requirement that the control unit provides the sole source of power."

Applicant would respectfully ask the Examiner to consider that the hermetic sealed embodiment described in the specification provides support for the idea that "all power for powering said sensing unit is derived from said control unit."

The specification states,

> Power can be transmitted through the skin to implanted power supply 34. Power receiving coil 38 receives the AC transmission which is converted to DC in rectifying circuit 40 to recharge implanted battery 36. Data collection system 20 is enclosed in **a hermetically sealed container 60** which protects the electronics from the corrosive effects of body fluids. The present inventors found that a metal case fabricated of titanium will

permit **sufficient radiated power** to penetrate **to fully charge battery 36.** The case can also be fabricated of a ceramic material, such as Dow Corning Macor, which is machinable, and can be used to produce hermetic packages. For metal housings, receiving coil 38 can be connected to hermetically sealed electronics via a hermetic feed through and receiving coil 38 can be encapsulated in bio-compatable epoxy. This arrangement increases the efficiency of **reception of power from control unit 50.** Sensor 22 may be any sensing device, as described herein above, such as a sensor to detect implant micro-motion, internal pressure, torque, and loading. (page 9, line 25 to page 10 line 9).

The specification also states,

"Battery 36 is a lithium battery or another type of battery that provides long life and **may be recharged many times**. Recharging may be accomplished by placing the **external control unit 50** within close proximity of sensor unit 20 so coils 38a and 38b are closely spaced to provide efficient magnetic coupling." (page 10, lines 20-23).

Once "recharged many times" all power from battery 36 must have been derived from the source of the recharging, control unit 50. For the hermetically sealed container 60 embodiment, battery 36 cannot be accessed or replaced without breaking the hermetic seal. Thus, without destroying the sensing unit for its intended purpose, power for hermetically sealed sensing unit 20 can only be obtained by recharging battery 36 from radiated power received from control unit 50 by sensing unit 20, as described in the above quoted portion of the specification. Once recharged many times, all power provided by battery 36 must have been derived from radiated power that was received from control unit 50 by receiving coil 38 of sensing unit 20. Thus, the specification teaches an embodiment in which "all power for powering said sensing unit is derived from said control unit."

Therefore the rejection of claims 1-26, 28-30, 32, 34-35, 38-39, 64-74, 77-79, and 82-84 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement and as adding new matter, has been traversed.

Claim Rejections--35 U.S.C. § 102(e)

The Examiner rejects claims 40-54, 56-63 and 75-76 under 35 U.S.C. § 102(e), as being anticipated by Agre. The Examiner states that "each sensor has an identity (col. 10 line 9) which constitutes an address." The Examiner also states that "the signals transmitted from the sensing unit can be transmitted to another sensing unit (col. 2, line

43). Thus, another sensing unit can read as the claimed control unit and include a second data transmitting/receiving device (22 in FIG. 3 and Fig. 9) and second data storage device (16, 21). The control unit can send out signals including address information (a frame synch slice, col. 10, lines 30-35 sent to a particular sensing unit which requires address information in the signal)."

In the response to applicant's arguments section, the Examiner further states that applicant's argument is that "claim 40 calls for each sensing unit to have an address and that the control unit is not capable of communicating with each sensing unit based on its individual address since the units do not have addresses." The Examiner then states, "this argument is not correct. Agre discloses that each sensor has an 'identity' which corresponds to an address. Additionally, the control unit can send out signals including address information (a frame synch slice, col. 10, lines 30-35 sent to a particular sensing unit which requires address information in the signal).

The Examiner states that applicant's argument is self contradictory concerning the "internal I/O addressing" employed by Agre since the previous argument made by applicant held that Agre had no address arrangement at all, now applicant is admitting the presence of at least an "internal address" for each sensing unit. Additionally, the claims provide no discussion about the nature of the address itself, so the 'internal I/O addressing' admitted by applicant to exist in Agree would not distinguish from the content of claim 40 in its present form."

First, applicant agrees with the Examiner that applicant's argument is that Agre does not teach or suggest the limit of independent claim 40 that "each addressable sensing unit of said network of addressable sensing units has an individual address, wherein said control unit **is capable of transmitting address information to communicate with an individual addressable sensing unit based on said individual address**."

In Agre **each unit communicates with all other units within radio communications range**. There is no unit that is capable of transmitting address information to communicate with any other individual addressable sensing unit based on the individual address, as provided in claims 40 and 50.

Agre needs to communicate without such individual addressing for his security application. Agre wants to detect an intruder anyplace he has sensor units. He wants all channels open and therefore does not teach or suggest communicating with an individual addressable sensing unit based on its individual address. If Agre individually communicated based on the individual addresses further invention would be needed to make his scheme work for his intended purpose of detecting an intruder.

Agre teaches a technique for allowing all the sensing units to communicate with all others within range, and this requires avoiding limiting communication based on an

address. Agre's multihop system has each and every unit communicating without control from any other unit. Agre thus teaches against the idea of claim 40 and claim 50.

Furthermore, in Agre, the "pre-stored identity" of an individual node, described in column 10, line 9 is compared by a microprocessor in that individual node "with a pre-programmed master table or schedule to determine what time slots in a TDMA scheme are allocated to that node." This on-board comparison of a pre-stored identity with an on-board pre-programmed master table to determine what time slot is allocated is clearly distinguished from the scheme of claim 40 that involves the control unit capable of transmitting address information to communicate with an individual addressable sensing unit based on its individual address. In the Agre scheme no unit transmits address or identity information. In Agre no unit communicates with another unit based on its individual address or identity. Determining the allocated time slice for communication meets neither of these limits.

Nor is the I/O addressing within a node, as described in column 10, lines 1-4 of Agre related to the addressing for external communication, such as with the control unit of claim 40, or with another node, as the examiner points out. While such internal I/O addressing is indeed "addressing," it is for addressing entirely within a node and does not involve any transmitting of address information to the node from external to the node as provided by claim 40 in which "said control unit is capable of transmitting address information to communicate with an individual addressable sensing unit based on said individual address."

While, as the Examiner points out, the claims provide no discussion about the nature of the address itself, claim 40 does provide that the control unit is capable of transmitting address information," and there is no teaching or suggestion in Agre of this capability. Claim 40 also provides for the control unit "to communicate with an individual addressable sensing unit based on said individual address," and there is no teaching or suggestion in Agre of this either.

As to the Examiner's point that the control unit can send out signals including address information (a frame synch slice, col. 10, lines 30-35 sent to a particular sensing unit which requires address information in the signal), applicant would respectfully ask the Examiner to consider that the procedure described by Agre in column 10, lines 30-35 is **a way of avoiding addressing.** In this section Agre states, "after initialization 85 the microprocessor 20 forms a schedule 86, then sets transceiver 12 to listen for the frame synch slice 95a. When frame synch slice 95a is received the microprocessor 20 sets an internal timer to and commences the appropriate activity according to its schedule 86." The frame synch slice 95a coming according to the schedule does not involve an address, does not involve transmitting address information, and does not involve communication of a control unit "with an individual addressable sensing unit based on said individual address."

In claim 40 of the present patent application the control unit transmits address information to communicate with an individual sensing unit based on its individual address. Agre does not teach or suggest this idea.

The Examiner further notes that applicant's argument concerning a real time signal from the control unit to the sensing unit is speculative and that Agre does not suggest any time lag when sending signals between any of the network nodes. While applicant agrees that Agre does not expressly mention a time lag, applicant would ask the Examiner to consider that Agre's TDMA network does not provide real time communication. Agre's units receive information in specific time slices, as described in column 10, lines 19-25. Outside of these time slices Agre's units cannot and do not communicate. Thus, even though Agre does not expressly state a time lag or expressly state that communication is not in real time, communication in Agre is nevertheless subject to a delay and is not in real time since it must await the pre-programmed time slice.

Regarding claim 42, Agre does not teach or suggest "wherein said second transmitter is connected to transmit address information to activate at least one from the group consisting of all of said sensing units, specific ones of said sensing units, and one of said sensing units." Claim 52 has a similar limit. Agre has no transmitter that transmits address information to activate all the sensing units, specific ones or one of the sensing units.

Regarding claim 43 and 53, Agre has no unit that provides an address to query each sensing unit individually.

Regarding claim 44, Agre's multihop system does not provide for one unit transmitting a timing signal for synchronizing.

Regarding claim 47, Agre does not teach a real time signal triggering. In Agre communication is in time slices.

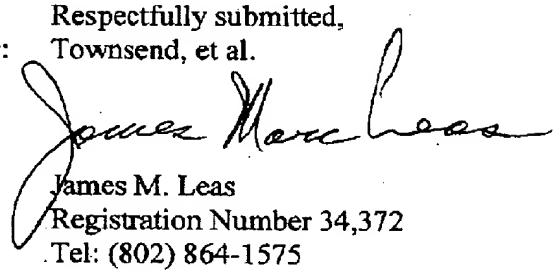
Therefore the rejection of claims 40 and 50, and claims dependent thereon, including claims 41-54, 56-63 and 75-76 under 35 U.S.C. § 102(e), as being anticipated by Agre has been traversed.

Entry of the Present Amendment

Applicant respectfully requests entry of the present amendments to claims 80, 81, and 83. Applicant believe that these amendments address the 35 USC 101 issues raised by the Examiner and do not introduce new issues for consideration or search.

Reconsideration of the application as amended is requested. Applicant respectfully requests favorable reconsideration. If there are any questions please call applicant's attorney at 802 864-1575.

Respectfully submitted,
For: Townsend, et al.



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